



Evaluating the Estimate at Completion (EAC)

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NAVY CEVM





Outline

- IEAC Formula
- IEAC Performance Index selection
- IEAC Comparison to EAC
- TCPI Formula
- Evaluating the TCPI against CPI





Can you trust the contractor EAC?

The contractor has just reported a new EAC, but how do you know if the estimate is any good?

- Requires objective, formulaic approaches
- Two standard ways of evaluating EAC reasonableness
 - Independent Estimate at Completion (IEAC) comparison
 - TCPI to CPI comparison
- These methods tend to be most reliable when the contract is between 15% and 85% complete.





Independent Estimate at Completion

This is the likely final cost of the contract...

...given this is the budgeted effort that remains to be completed...

$$BCWR = BAC - BCWP$$

$$IEAC = ACWP + \left(\frac{BCWR}{Performance\ Index} \right)$$

...given this is the incurred cost to date...

...if this is the index *chosen* to represent average cost efficiency for future effort





What Performance Index Makes Sense?

What incurred cost performance data is the most relevant for projecting future cost?

Performance Index	Consider it when...
CPI_{cum}	Cumulative cost performance has been relatively stable ITD without significant schedule delays or advancement, so it reasonably represents future cost performance
$CPI_{cum} * SPI_{cum}$	Cost performance has been stable ITD, but past schedule performance may have bearing on the degradation or improvement of future cost efficiency
CPI_{3month}	Performance incurred over the past three months is likely to continue
CPI_{6month}	Performance incurred over the past six months is likely to continue
$CPI_{current}$	Current month cost performance is expected to continue for the remainder of the contract
Other *	You have a strong reason and/or evidence to support an alternate anticipated future cost efficiency of your choosing

* the more objective the index, the more credibility the EAC will have

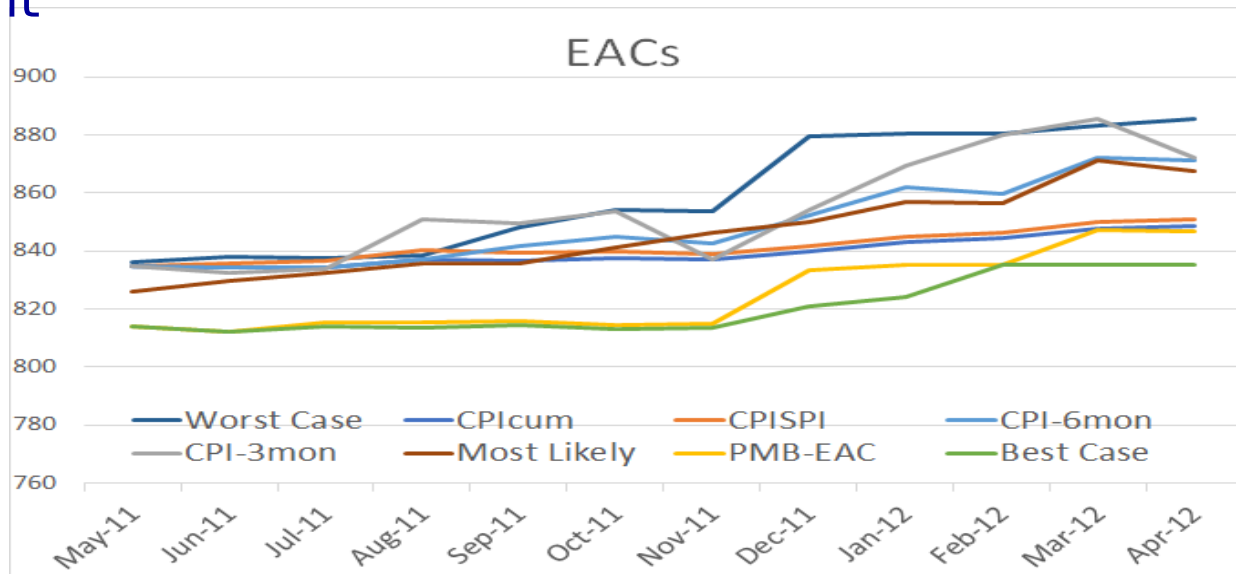


Decide which is most pertinent, but evaluate all of them!



IEAC Results

- Determine if the contractor EAC falls within the range of predicted IEAC results and its relationship to what you believe is the most pertinent IEAC
- A Chart plotting EAC/IEAC trends may provide additional insight



IEACs are not to be used as formal EAC estimates!





To Complete Performance Index

This is the level of cost efficiency required in the future...

...given this is the budgeted effort that remains to be completed...

$$BCWR = BAC - BCWP$$

$$TCPI = \frac{(BCWR)}{(Cost\ Target - ACWP)}$$

...if this is final target cost

...given this is the cost incurred to date...

$TCPI_{BAC}$ → the cost target is the BAC, so it calculates the cost efficiency necessary to complete on budget

$TCPI_{EAC}$ → the cost target is the EAC, so it calculates the cost efficiency necessary to achieve the current estimate





What is a good TCPI?

- A good TCPI is one that's achievable
 - Predicts a level of future cost efficiency which seems reasonable based upon incurred cost efficiency to date
 - TCPI is evaluated by how much it differs from CPI
 - Generally speaking, the higher CPI the better. By contrast, the lower the TCPI, the more likely it is that the EAC can be achieved
 - Some amount of variation is expected based upon performance challenges or conservatism, but TCPI should neither be too far above nor too far below performance incurred to date
 - An EAC is considered unlikely if TCPI and CPI that differ by 0.10 or more
 - Lends credibility to the overall EAC position.

CPI_{CUM}	TCPI_{EAC}	Delta	Prospect
0.95	1.07	0.12	Unlikely (optimistic)
1.11	1.00	0.11	Unlikely (pessimistic)
0.85	0.87	0.02	Likely
1.09	1.05	0.04	Likely





Point of Contact

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